

JUNE 2019 Update

5G Millimeter Wave Forecast Update

Major changes to the forecast over the last three months include:

1. We've increased our forecast for radio units in 2019, to account for positive developments with both Verizon and AT&T pushing ahead their deployment plans. In addition, we have added a significant number of radio units due to announced plans by NTT DoCoMo, KDDI, Softbank, and Rakuten in Japan.
2. AT&T has emerged as the major winner in the 24 GHz auction, and with the auction closing in June 2019 we anticipate some 24 GHz deployment during 2019 with a more significant number in 2020. T-Mobile also gained some 24 GHz spectrum but we expect AT&T to account for the majority of near-term deployment (assuming that the T-Mobile merger with Sprint moves forward as planned)
3. We've adjusted the regional split to indicate slightly larger numbers in Korea during 2019 and 2020, and roughly 30,000 gNodeB units in Japan during the same timeframe. We've set the forecast to include many of these units before the Japanese Olympic Games in 2020, but we don't currently expect the entire deployment to happen before the Olympics (this is an area to watch for upside).
4. Table 1-4 was included in this forecast to track the distinctions between high power gNodeB units (above +53 dBm EIRP) and lower power units (below +53 dBm, which corresponds to deployment in stadiums or subway stations where higher power would be detrimental.) This quarter, we have adjusted the profile to show our expectation for about half of the Japanese deployment to be 'indoor', in subways and stadiums)
5. We've adjusted our profile of 64T, 256T, and 1024T configurations to correspond with higher numbers of 'indoor' units and fewer 1024T units in the high power application. This tentative breakdown is likely to change as the operators learn about the number of beams and beamwidth that will be optimal in their networks.
6. Our forecast for handsets and hotspots has not changed in the long term, but we adjusted the 2019/2020 figures to reflect the more rapid deployment in Japan. In particular, we expect many of the devices in Japan to be hotspots (on trains and other locations for network offloading)